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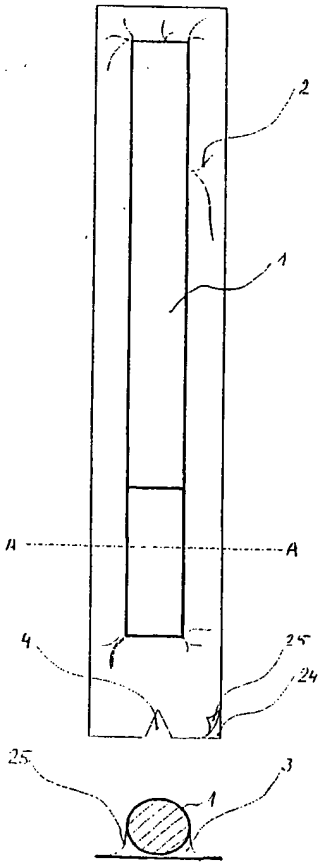
(54) Title: THE PACKAGE FOR TOBACCO PRODUCTS AND THE PROCESS OF THE PACKING



(57) Abstract: The package for tobacco products (1), primarily cigarettes and cigars, formed by a hermetically sealed case forming a pocket for at least one product. The invention is that the inner atmosphere (3) of the package is rarefied and/or contains the addition of inert gas. The way of packing of tobacco products into a hermetically sealed case forming a pocket is essential due to the fact that the case is sealed in the vacuum atmosphere and/or the protective atmosphere with the addition of inert gas.

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THE PACKAGE FOR TOBACCO PRODUCTS AND THE PROCESS OF THE PACKING

Technical field of the invention

The invention relates to the package for tobacco products, primarily cigarettes and cigars as piece goods or in a small number of pieces.

The invention relates also process of the packing of the tobacco products.

The prior art

At the present time tobacco products such as cigarettes and cigars are packed in boxes or packets with a greater number of pieces, usually by 20 pieces when speaking about cigarettes. This packing, however, is unsatisfactory both from a practical and a hygienic viewpoint. The reason is that in the started on packet of cigarettes they move freely which results in shaking out tobacco, spilling the cigarettes, contact with the surrounding atmosphere etc.

Well-known is also packing of the so-called piece cigarettes into blister packages. In case of damaging such a package, even if the damage is visually imperceptible, the package no longer fulfils a function of a hygienic packing. Visual control cannot reveal minor damages. Another disadvantage is the possibility of generating of undesirable gas when sealing is carried out, due to thermal breaking through the cover foil to the base, and penetration of the gas into the inner area of the package.

The aim of this invention is to develop a package for tobacco products which would enable packing of one piece or a smaller number of pieces and, moreover, would meet all hygienic and practical requirements.

The aim of the invention

All the above requirements are entirely met by the package according to the invention for tobacco products, primarily cigarettes and cigars, which is formed by a hermetically sealed case forming a pocket for at least one product; the inner atmosphere in the package is rarefied and/or contains the addition of inert gas.

The advantage of the package according to the invention is a creation of the inner atmosphere which supports durability of the product and ensures its required properties. Due to the effect of underpressure and a stuck foil the product cannot move in the package, the occurrence of mildew and microorganisms is eliminated, humidity can be controlled etc. Packing into the package according to the invention meets the strictest hygienic requirements, products packed as single pieces can be sold and stored for a longer period without affecting the product quality.

From a practical and a manufacturing viewpoint it is very useful if the package is formed by the longitudinal fold of a yielding foil hermetically sealed from three sides, or by two strips of a yielding foil circumferentially hermetically sealed, or by a tube-shaped case from a yielding foil hermetically sealed on both ends.

So as to achieve a higher strength, the package should consist of a solid base layer and a cover layer from a yielding foil; then the cover layer is circumferentially hermetically sealed with the base layer.

The design of the package enables visual control of the product because foils in various transparent colours can be used. In case of damaging the foil there occurs penetration of the surrounding air and so each even a minor damage becomes immediately perceptible because the package is not stuck to the product.

The invention is also the way of packing of tobacco products into the hermetically sealed case for at least one product. The fundamentals of this invention lie in the fact that the said case is hermetically sealed on both ends in the vacuum atmosphere and/or the protective atmosphere with the addition of inert gas.

A higher effect of the way of packing is a formation of the package according to the invention with the above advantages.

Overview of the Figs on the drawings

The package for tobacco products according to the invention will be described more fully in the following examples with the use of drawings where Fig. 1 represents a view and a sectional view of the package for one piece of the product formed by the longitudinal fold of the foil, Fig. 2 represents the package formed by two strips of the foil and Fig. 3 represents the package formed by the tube-shaped case. Fig. 5 represents the package for one piece of the product formed by the solid base layer and the cover layer and Fig. 4 represents the package for more pieces of the product.

Examples of embodiment of the invention

Example 1:

An airtight yielding foil 2 in the shape of a rectangle with printing is lengthways folded along the longitudinal axis of the product 1. The fold 21 is circumferentially hermetically sealed from three sides and the inner atmosphere 3 is formed by the rarefied air.

Example 2:

Two airtight yielding foils 1 in the shape of a rectangle, one of these foils is transparent, are circumferentially hermetically sealed round one piece of the product 1. The inner atmosphere 3 is formed by the rarefied air with the addition of inert gas. On one of the shorter sides of the sealed strips 22 of the foil 2 there is a cut 4 ensuring easy opening.

Example 3:

The package is formed by the airtight yielding foil 2 in the shape of the tube-shaped case 23 hermetically sealed on both ends. The inner atmosphere 3 is formed by the rarefied air with the predominance of inert gas.

Example 4:

The package is formed by the solid base layer 24 and the cover layer 25 from the yielding foil 2. The cover layer 25 is circumferentially hermetically sealed with the base layer 24. The inner atmosphere 3 is rarefied and generates underpressure towards the environment.

Example 5:

Two airtight yielding foils 2 of bigger dimensions than are those in the previous examples in the shape of a rectangle are circumferentially hermetically sealed round a few pieces of the products 1 which are not touching. The inner atmosphere 3 is formed by the rarefied air with the addition of inert gas. On one of the shorter sides of the sealed strips 22 of the foil 2 there is a cut 4 ensuring easy opening. Instead of one of the foils 2 the solid base layer 24 can be used.

Packing of tobacco products 1 into the package according to the invention is carried out in the protective rarefied atmosphere, i.e. in the vacuum atmosphere, eventually with the addition of inert gas. The product 1 or several products 1 are placed in the airtight foil 2 that is then circumferentially hermetically sealed. Inside

the case in the inner atmosphere 3 there is generated underpressure which causes sticking of the foil 2 to the product 1 or products 1.

Industrial applicability

The package for tobacco products according to the invention can be industrially manufactured and used in the trade network, restaurants, hotels and primarily when tobacco products are sold through vending machines.

PATENT CLAIMS

1. The package for tobacco products, primarily cigarettes and cigars, formed by a hermetically sealed case forming a pocket for at least one product, ***characterised in that*** the inner atmosphere in the package is rarefied and/or contains the addition of inert gas.

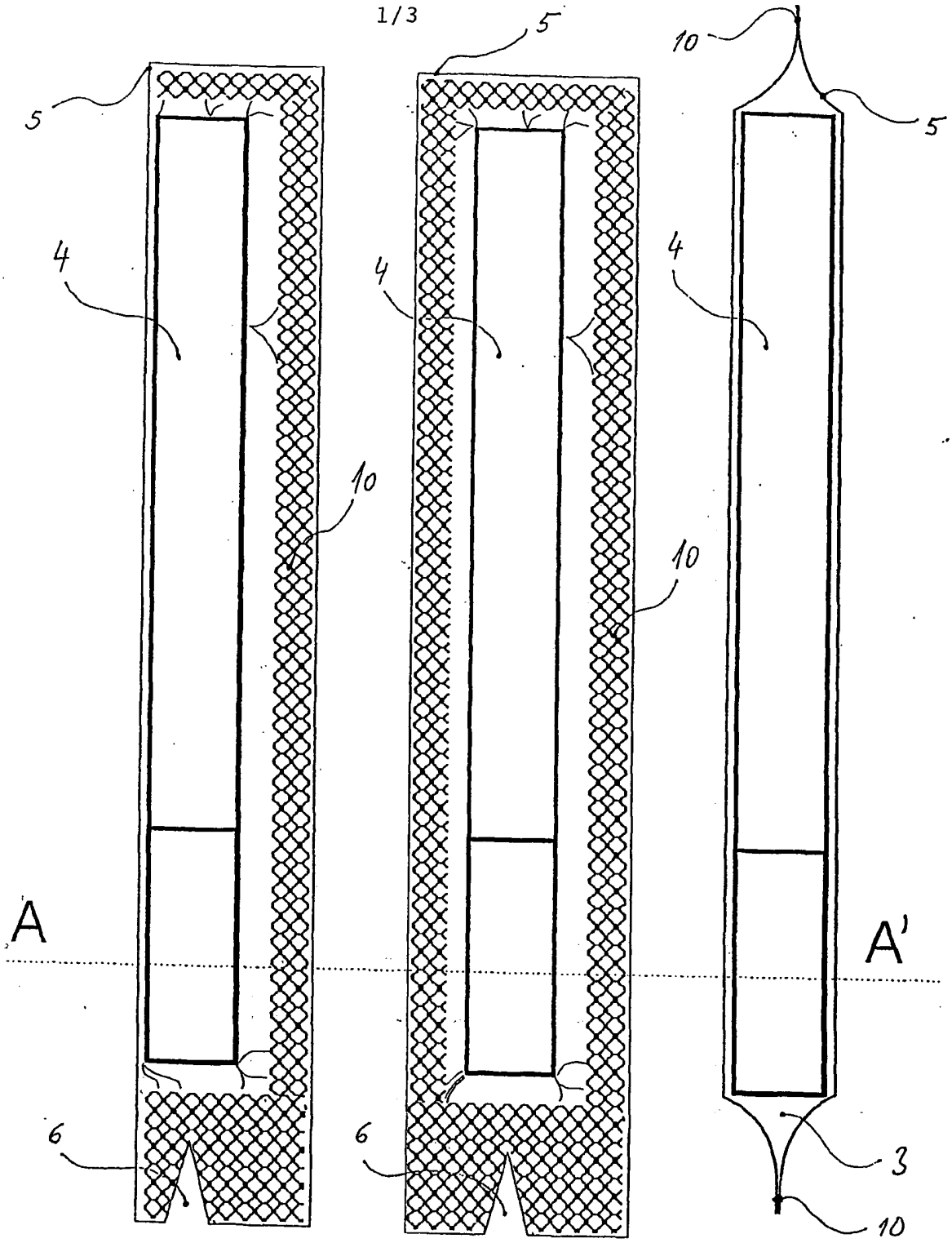
2. The package according to the claim 1, ***characterised in that*** it is formed by the longitudinal fold (21) of a yielding foil (2) hermetically sealed from three sides.

3. The package according to the claim 1, ***characterised in that*** it is formed by two strips (22) of a yielding foil (2) circumferentially hermetically sealed.

4. The package according to the claim 1, ***characterised in that*** it is formed by a tube-shaped case (23) from a yielding foil (2) hermetically sealed on both ends.

5. The package according to the claim 1, ***characterised in that*** it is formed by a solid base layer (24) and a cover layer (25) from a yielding foil (2); the cover layer (25) is circumferentially hermetically sealed with the base layer (24).

6. The way of packing tobacco products into a hermetically sealed case forming a pocket for at least one product, ***characterised in that*** the case is sealed in the vacuum atmosphere and/or the protective atmosphere with the addition of inert gas.



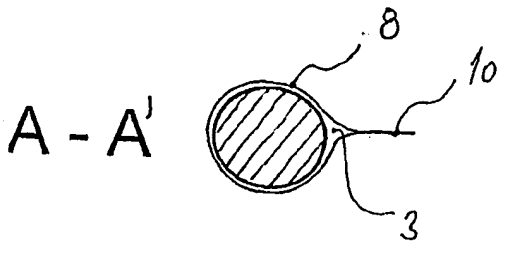


Fig. 1

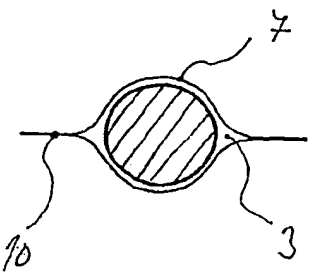


Fig. 2

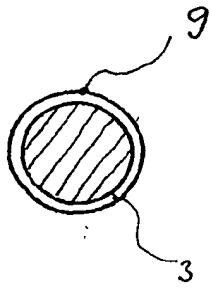


Fig. 3

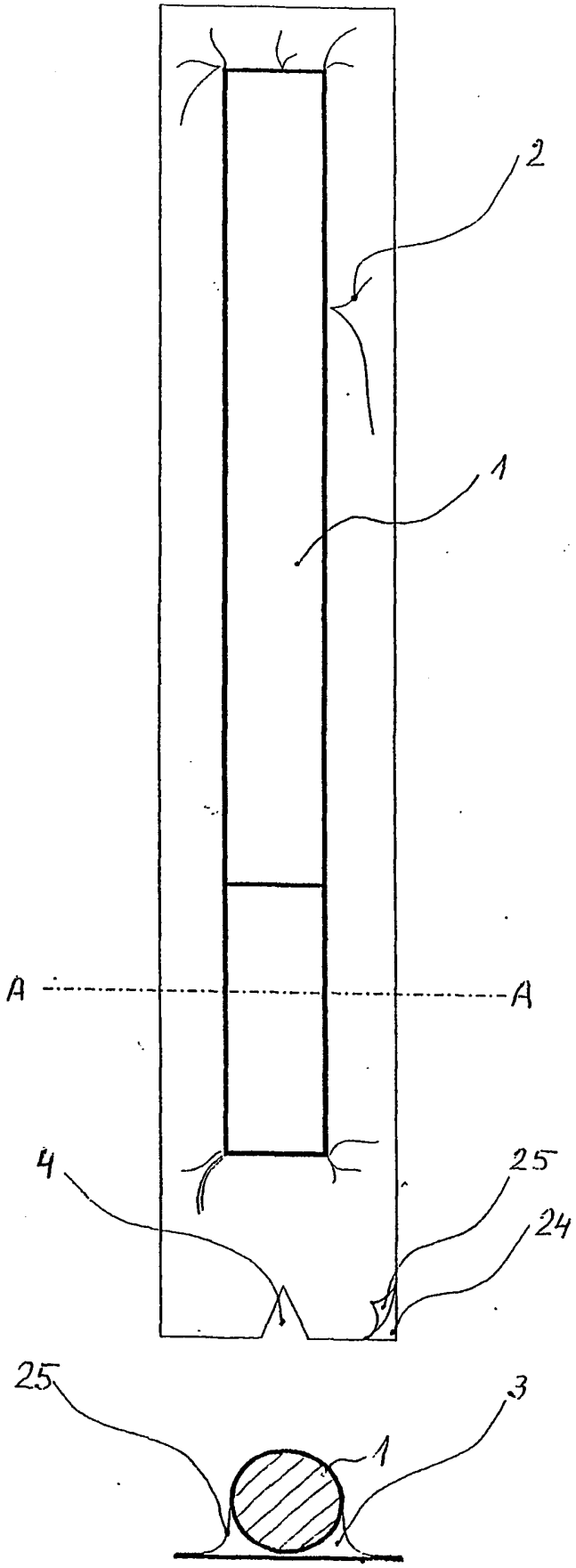


Fig. 4

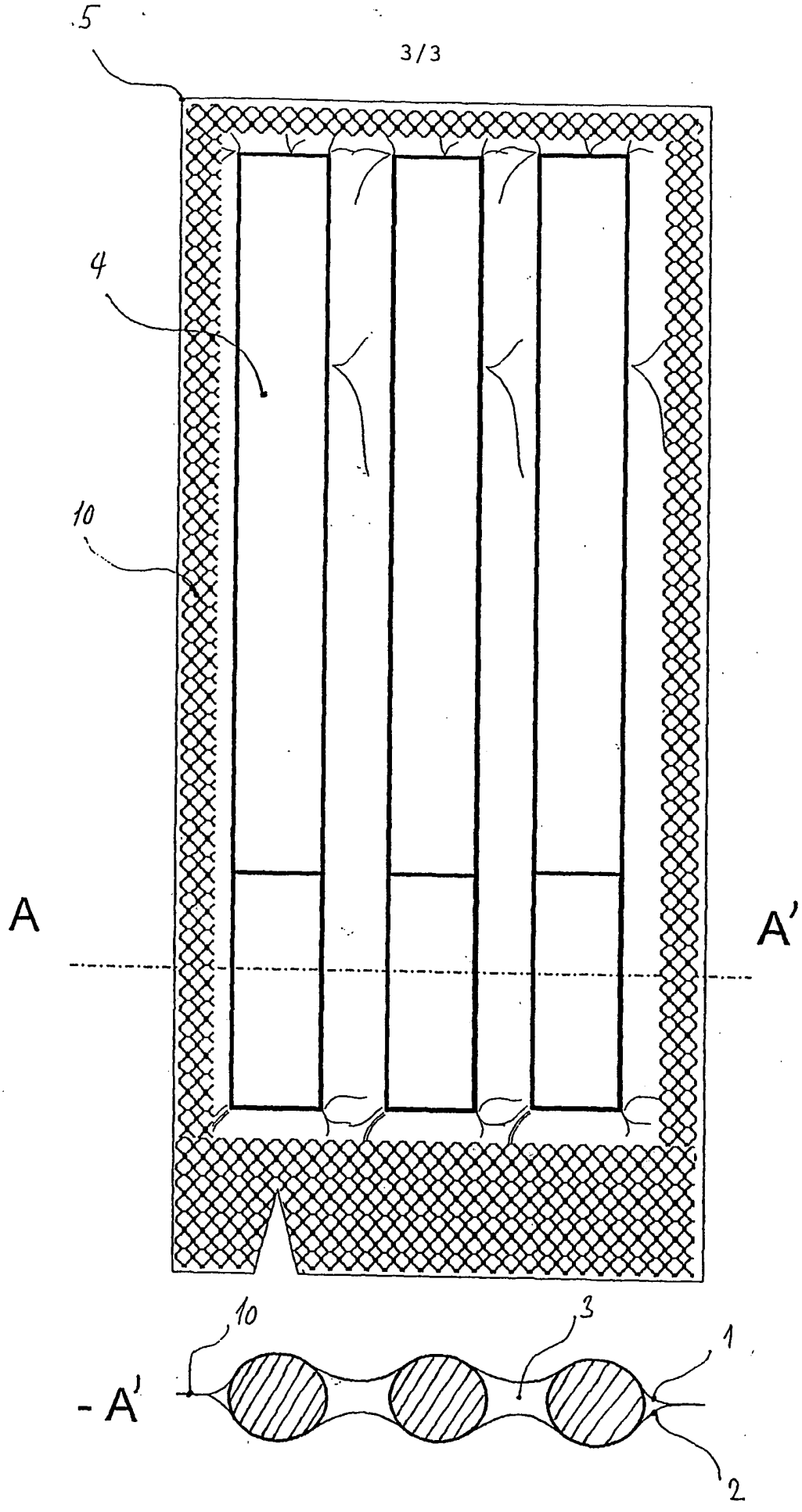


Fig. 5

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65D85/10 B65D81/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 28993 A (GOLDMAN) 9 July 1998 (1998-07-09) the whole document	1,3,6
X	EP 0 751 069 A (SASIB) 2 January 1997 (1997-01-02) abstract; figures	1,6
X	WO 96 14763 A (BROWN) 23 May 1996 (1996-05-23) the whole document	1,6
X	US 1 458 585 A (MCCROSSON) 12 June 1923 (1923-06-12) the whole document	1,6

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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Date of the actual completion of the international search	Date of mailing of the international search report
29 August 2001	06/09/2001

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Gino, C

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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